

Running the Numbers

A Practical Guide to Regional Economic and Social Analysis



John Quintero



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In memory of my grandparents,

Rose Marie Francesca (1918–2008) and Louis Facinelli (1909–2000)
Juliet Cifuni (1919–2012) and John Quintero (1918–2010)

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Preface and Acknowledgments

A book about regional analysis in the United States began in Europe.

In the spring of 2010, I had the opportunity to spend a month in Europe as part of the Marshall Memorial Fellowship Program sponsored by the German Marshall Fund of the United States, a philanthropic organization that promotes transatlantic cooperation. The fund annually selects a group of young American and European fellows to travel to their nonnative region to gain exposure to a broad array of issues related to public affairs.

After the fellowship ended, I spent a few days on holiday in Innsbruck, Austria, an Alpine city where I spent time during college and that lies some 100 miles northeast of the small town in the Italian Tyrol where my grandfather was born. While hiking in the Alps and dining with local friends, I thought a great deal about my fellowship experience and realized that so many of the conversations I had with the 13 Americans with whom I had the privilege to travel focused on regional rather than national issues. Through those discussions, I recognized that many of the projects with which I have been involved professionally have provided me with perspectives of interest to regional leaders—perspectives that could enrich their abilities to address real problems. That insight sparked this book.

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I was extremely fortunate to benefit from the support of many friends and colleagues while writing the book, although, of course, the responsibility for any errors and omissions rests solely with me. Lara Raisanen read the very first pages and encouraged me to proceed with the project. Lawrence DiRe, a classmate from graduate school at the University of North Carolina at Chapel Hill and a dedicated professional public servant, provided early encouragement and took the time to read several chapters, as did Will Alexander, another friend from graduate school.

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John Quintero
Chapel Hill, North Carolina

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Running the Numbers

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Introduction

Bringing Order from Chaos

Economic and social data are seemingly everywhere. Each month, organizations of all kinds release torrents of information pertaining to such topics as output, employment, prices, income, and poverty. Because these numbers hold the power to move markets, drive elections, and shape public policies, they receive extensive scrutiny from analysts, executives, politicians, journalists, and citizens. During booms, business and political leaders hold up positive data—deservedly or not—as proof of their collective wisdom, but during busts, critics point to negative data—deservedly or not—as evidence of corporate and governmental failures. Especially during severe recessions like the recent one from which the United States slowly has been recovering since 2009, every major data release serves as a referendum on the state of the union.

Given the sheer size and diversity of the United States, the collection and analysis of economic and social data is an expensive, complex endeavor. In fiscal year 2011, the three major federal statistical agencies—the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, and the U.S. Bureau of Labor Statistics (BLS)—had a combined budget authority of \$1.8 billion.¹ State governments, meanwhile, funded the analytical capacities housed in agencies like commerce, agriculture, and workforce departments. Private-sector actors ranging from banks to trade associations to consultants also invested in data collection and analysis, as did universities, think tanks, and nongovernmental organizations.

To a casual observer, the quantity of available economic and social data must be overwhelming—an impression related in no small part to the lack of a central national statistical agency in the United States. Consider this: the BLS alone released an average of 15 employment-related reports each month in 2012.² Even a crucial statistic like the national unemployment rate is more complicated than it first appears: the monthly employment report actually presents two versions of the official rate—one adjusted for seasonal factors, a second that is not—and five alternate calculations.³ Exacerbating the confusion is the dry, technical style of writing favored in government reports. And while major statistics like the unemployment rate, the Gross Domestic Product (GDP), and the poverty rate receive national media attention, the coverage tends toward simplistic “up-or-down” stories that are highly susceptible to obfuscation and misrepresentation.

2 INTRODUCTION

Navigating the labyrinth of national economic and social data is a difficult process, but the maze is even more disorienting at the state, regional, and local levels. At the subnational level, there exists considerably less information owing to the practical difficulties and costs associated with collecting relevant data. What data exist often appear well after the fact. The Bureau of Economic Analysis, for instance, releases national GDP estimates quarterly, but publishes state figures annually.⁴ Reductions in local media coverage of economic affairs tied to the downsizing of local media outlets further limit the dissemination of what data are available.

What, then, should public officials, business executives, and community leaders responsible for state, regional, or local affairs do? Can social and economic analysis help civic leaders, most of whom are laypeople wrestling with highly technical issues, identify public problems and design effective solutions? Is it even possible for regional leaders to bring a seemingly chaotic flow of facts to bear on matters of pressing local importance?

PURPOSE AND METHODS

“Yes” is the answer offered by this practical guide to regional economic and social analysis. Quality data analysis can yield rich insights into how communities function, but for leaders to benefit, they must adjust their thinking. Too often, individuals afford data more credit than they deserve and mistakenly view analysis as a process leading to the identification of a single correct solution. In reality, economic and social analysis is no more likely to yield one right answer than theological inquiry is to resolve which religion is the one true faith. Instead of asking the impossible, leaders should see analysis for what it is: a systematic framework for documenting regional realities, understanding underlying dynamics, identifying potential responses, weighing possible choices, and making rational decisions. Think of economic and social data as the raw materials to which an observer can apply analytical techniques to craft specific regional stories, such as how an area’s industrial profile changed over the course of a business cycle.

To facilitate a shift in thinking, this book strives to demystify economic and social analysis through an explanation of fundamental concepts, sources, and methods. Three assumptions inform the discussion. First, regional economic and social analysis is a powerful tool for community advancement, yet the power rests not in the analyses themselves but in an observer’s ability to find meaning in them. Second, a basic computer connected to the internet usually is all that a regional leader needs to access extensive amounts of economic and social data at minimal financial cost. Finally, fundamental analytical tools and techniques lie within the comprehension of any curious, educated individual willing to invest some time in learning about essential data sources and basic mathematical and statistical concepts and techniques.

That last point merits elaboration. Perhaps owing to the ineffective ways in which quantitative disciplines such as mathematics, statistics, and economics frequently are taught, many individuals harbor an intense fear of numbers—a

fear that causes people either to avoid numbers altogether or to grant them a precision they seldom possess. In truth, all data are rough approximations of reality. The fact that quantitative information frequently appears in forms that are logical to experts yet baffling to laypersons only compounds misunderstandings. This book consequently employs math selectively and neither assumes a nuanced understanding of quantitative techniques nor employs techniques beyond basic arithmetic. The emphasis is on explaining core concepts, so the approach is a narrative one in which most chapters revolve around an extended analysis of an actual metropolitan region.

ORGANIZATION AND STRUCTURE

Running the Numbers contains three sections. The first section introduces fundamental concepts encountered in regional analyses. Chapter 1 considers what defines a region and introduces basic regional geography. Chapter 2 asks what “economic growth” is and how to measure it. The only theoretical part of the book, chapter 3, sketches major models that attempt to explain why regions grow and develop over time. Chapter 4 discusses basic data concepts, sources, and calculations and provides a review of basic statistics.

The second section applies these concepts and theories to selected topics of regional economic and social significance: chapter 5 explains demographics, chapter 6 explores business structure, and chapter 7 describes how labor markets function. To demonstrate the applicability of the data sources and analytical tools, each chapter contains an extended example based on real data for an actual American metropolitan area. The examples generally rely on data available at the time of writing, which typically means 2011, although in a few instances older information appears. Regardless, readers should avoid becoming fixated on specific dates because the goal of the book is to explain fundamental concepts, not individual values or long-term trends. Seen that way, grasping how the BLS defines and measures unemployment is more important than knowing the unemployment rate for a particular year; after all, a reader who has mastered the concept of unemployment should be able to interpret specific calculations derived from the idea.

The final section addresses issues linked to income and living standards: chapter 8 considers income and wealth as measures of living standards, while chapter 9 examines income distribution, income inequality, and income deprivation. The concluding chapter identifies seven mental habits that can help regional leaders “run the numbers.”

This organizational structure ideally will draw readers into topics unfairly dismissed as inaccessible. Because each chapter builds logically and incrementally upon the preceding ones, a sequential reading will foster an understanding of individual subjects and their interconnections. At the same time, each chapter functions independently, so readers can jump directly to topics of personal interest. Perhaps the best way to profit from the book is to read it once from start to finish and then to revisit specific chapters in accordance with individual needs and tastes.

AUDIENCES AND TIMELINESS

Running the Numbers hopefully will enrich any curious reader, but the primary audience consists of regional elected officials, public administrators, business executives, and journalists—not to mention the staff members and senior managers of nongovernmental, civic, and philanthropic organizations—seeking a concise guide to economic and social analysis. Another important audience is students in multiple disciplines related to public affairs: public policy, urban and regional planning, public administration, social work, law, and journalism, to name but a few. The practical nature of the subjects covered in this volume nicely complements the more theoretical treatments of the same matters common in research methods classes, especially those offered at the graduate level. The book also functions as a handy one-volume reference work that can aid in the preparation of reports, theses, and dissertations.

Readers should understand that this volume is not a comprehensive textbook. Other excellent works explore individual topics in greater depth; discuss subjects mentioned only briefly in these pages, such as housing data; and pay much greater attention to theory. Readers with particular interests should consult the chapter notes and bibliography for more information. Nevertheless, the author's experiences as a researcher specializing in economic and social policy indicate that the topics included in this book are of frequent interest to regional leaders.

Ideally, readers will find the work a timely one. The problems that have afflicted the economy in the wake of the "Great Recession" have heightened public interest in statistical data and have led the statistical agencies to modify their programs to better capture current conditions, as the BLS did when it altered how it measures the duration of unemployment.⁵ Federal statistical agencies also have become entangled in political controversies, as occurred during the 2012 presidential campaign when some critics alleged that the BLS was manipulating unemployment data for partisan purposes.⁶ Meanwhile, federal budget reductions have led to the elimination of popular statistical products and the proposed termination of other programs, including several valued highly by the business community.⁷

Adding to the timeliness of the book is the ongoing release of data from the 2010 Decennial Census of Population and Housing, an enumeration of the American population. The Census Bureau published the first results in December 2010, and will continue to release data in the coming years.⁸ Another milestone was reached in late 2010, when the Census Bureau completed implementation of the American Community Survey, which provides yearly information about population characteristics for every community in the country; the annual availability of data previously collected once per decade is a boon to regional analysis. The Census Bureau also recently finished releasing data from the 2007 Economic Census and launched the 2012 version of that important enumeration of business establishments. Furthermore, the growth of the internet has led federal statistical agencies to overhaul their websites and endeavor to use information technologies to disseminate data more widely and conveniently: in 2012, for example, the Census

Bureau released the “America’s Economy” mobile application to provide instant access to key economic indicators.⁹

ASSUMPTIONS AND OUTCOMES

Although *Running the Numbers* is a dispassionate introduction to regional data and data analysis, some readers may try to attribute political or ideological views to the author based on the selection of topics. Such ideological questions are not particularly pertinent to a reference work like this one, but they may be asked and so deserve an upfront answer.

As the founder and principal of South by North Strategies, Ltd., a small research consultancy specializing in economic and social policy, the author recognizes that a market system is a powerful, often elegant means for organizing human relationships in pursuit of higher material living standards. The book consequently strives to deepen understanding of economic issues as they pertain to regions. Unless regional leaders grasp how an economy works, recognize strengths, perceive weaknesses, and appreciate the challenges facing local firms, entrepreneurs, and workers, their communities will not thrive. If support of market mechanisms represents a conservative worldview, at least in the American sense of the term, so be it.

Yet a respect for markets in no way implies an uncritical acceptance of market outcomes. Markets frequently fail and produce results that, even if efficient, are inequitable or offensive to popular conceptions of fairness and justice. Only common efforts can inoculate markets against their self-destructive tendencies, foster a more egalitarian community, and advance social equity. This is especially true in regard to the mechanism through which most individuals participate in the larger economy, that is, the labor market.

Much of this book follows the traditional approach of measuring living standards in relation to economic variables like output and income. The reduction of human well-being to a few factors measured solely in terms of money, however, obscures many other things that people value, such as happiness, health, education, security, and sustainability. Recall Senator Robert Kennedy’s famous description of the Gross National Product as a statistic that “measures everything in short, except that which makes life worthwhile.”¹⁰ Cognizant of that shortcoming, this book notes the defects of a number of statistics and discusses alternate approaches that have attracted interest in recent years, particularly in Europe. The purpose in referencing international approaches is not to assert that they are inherently superior to American ones, but to expose readers to the diversity of thought that surrounds concepts of fundamental social importance and to illustrate how other wealthy nations have grappled with the same questions.

The correct standard against which to judge this volume, then, is not in terms of politics, but in terms of effectiveness. If the book explains regional economic and social analysis to nonexpert regional leaders in ways that improve their abilities to bring order out of a seemingly chaotic flow of information for the benefit of individual communities, it will have succeeded in achieving its goals.

NOTES

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8. U.S. Census Bureau, “2010 Census Data Products: United States, at a Glance, Version 2.2,” <http://www.census.gov/population/www/cen2010/glance/> (accessed October 26, 2012).
9. As of October 25, 2012, information about the “America’s Economy” mobile application, including links for downloading the tool, was available at <http://www.census.gov/mobile/>.
10. Robert Kennedy, remarks at the University of Kansas, March 18, 1968, John F. Kennedy Presidential Museum and Library, <http://www.jfklibrary.org/Research/Ready-Reference/RFK-Speeches/Remarks-of-Robert-F-Kennedy-at-the-University-of-Kansas-March-18-1968.aspx> (accessed August 31, 2011). Gross National Product (GNP) was the primary measure of economic production used in the United States prior to the adoption of the concept of Gross Domestic Product (GDP) in 1991.

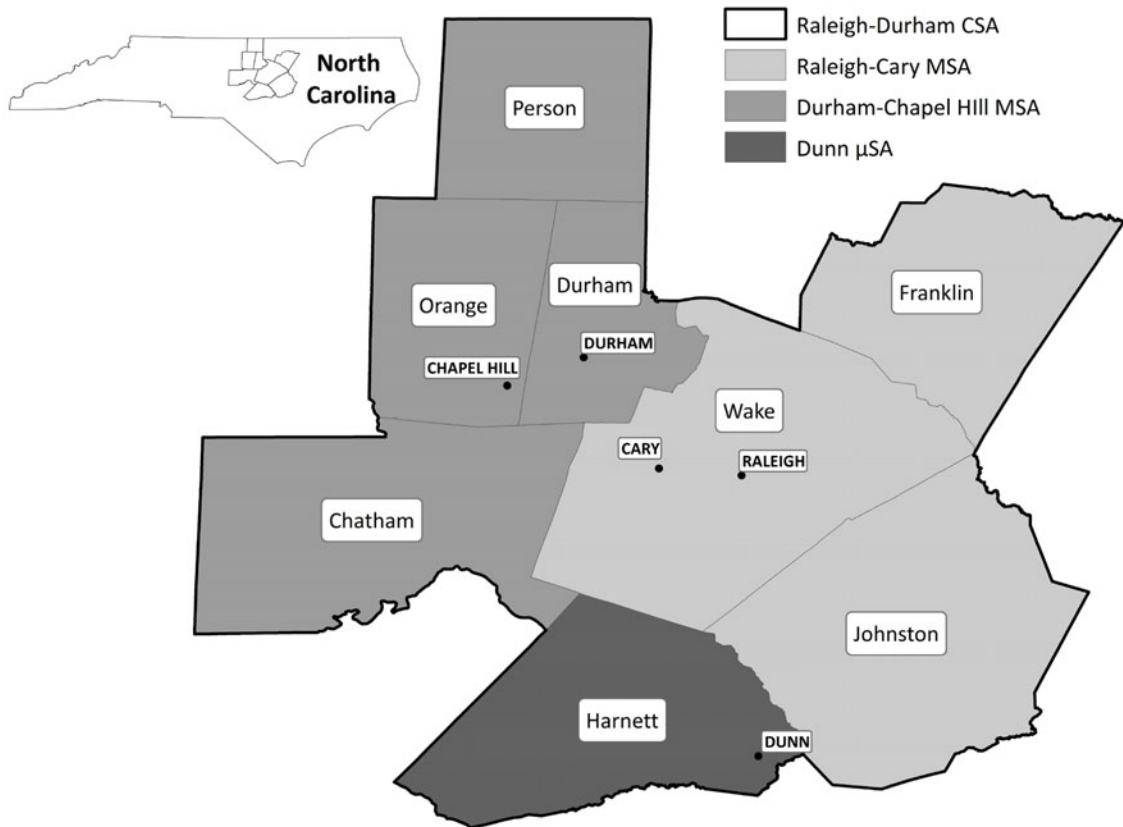
The Research Triangle region of North Carolina stretches south from the tobacco fields along the Virginia border into the ancient dunes of the Sandhills, east from the hilly Piedmont onto the flat Atlantic coastal plain. With 1.8 million residents in 2011, the Research Triangle was the 27th-most populous consolidated metropolitan region in the United States and the second-most populous one in North Carolina.¹

Besides inhabiting a distinct physical space, residents of the Research Triangle share economic, social, political, and cultural ties that shape the patterns of daily life. For despite the capabilities of communications and transportation technologies to link people across the globe, humans remain physical, time-bound beings who are likely to define themselves in relation to the communities in which they live and work. Put simply, place matters.

People may grasp intuitively the idea of a region, but popular understandings typically lack the precision necessary for economic and social analysis. Think of all the ways of viewing the Research Triangle region: The area encompasses eight counties and four sizable cities, Raleigh (pop. 412,000), Durham (pop. 232,000), Cary (pop. 139,000), and Chapel Hill (pop. 58,000). Seven of the counties belong to one of two metropolitan statistical areas, and the remaining county is an individual micropolitan statistical area (see Map 1.1). Collectively the eight counties form a larger combined statistical area, which itself sits in a larger 13-county state economic development region. That region, in turn, functions as a single labor market containing six workforce development areas and five community college service districts. And the broad Research Triangle region is home to at least 64 incorporated municipalities, some of which are rural in character, others urban or suburban.²

What, then, is the Research Triangle, and which version of the region should a civic leader consider when attempting to reach decisions on behalf of the common good? A definition that is too narrow in scope will exclude relevant parts of a region, but a definition that is too broad will include extraneous areas. One solution is to beg the question and concentrate on governmental geographies like cities and counties, even though economic and social phenomena seldom follow political lines. A labor market study of Durham County

Map 1.1 Principal Cities and Component Counties of Raleigh-Durham-Cary, NC Combined Statistical Area, 2009 Delineation



Source: U.S. Office of Management and Budget, “Update of Statistical Area Definitions and Guidance on Their Uses (OMB Bulletin No. 10-02),” December 1, 2009, <http://www.whitehouse.gov/sites/default/files/omb/assets/bulletins/b10-02.pdf>. Map prepared by William High.

that only included working-age residents of the county would miss the fact that, on average, half of the people who worked in the county between 2006 and 2008 commuted from other counties.³ When it comes to the labor market, the county lines are of little importance.

Such definitional problems are hardly unique to the Research Triangle. A threshold step in any study of regional economic and social issues therefore is defining the area of interest precisely enough for analytical purposes. To assist regional leaders in that task, this chapter introduces essential concepts related to regions and regional geography. The chapter begins by summarizing three ways of viewing regions, proceeds

to describe the system of regional geography developed by the U.S. Census Bureau, and concludes with a discussion of practical considerations associated with defining regions. As a way of illustrating the topics, the chapter offers examples drawn from data for the Research Triangle region.

THREE WAYS OF PERCEIVING REGIONS

Scholars, developers, journalists, planners, and politicians frequently invoke “regions” and “regionalism” as justifications for any number of public policies and investments. Perhaps one reason the term enjoys such popularity is because it lacks a clear definition. Observers of a region indeed may “know it when [they] see it,” to misapply Supreme Court Justice Potter Stewart’s famous definition of obscenity, but such an elastic understanding is inappropriate for regional economic and social analysis.⁴

Few residents of the Research Triangle would deny that it is a region of some sort, but many would contest its boundaries and its degree of interconnectedness. The Research Triangle nevertheless is a *region* in that it is “an area within the national economy that is sufficiently comprehensive in structure that it can function independently, although of course in most practical circumstances it has strong links with the rest of the economy.”⁵ Yet even that definition is vague, and in response, observers tend to view regions from one of three perspectives: territorial, functional, or administrative.

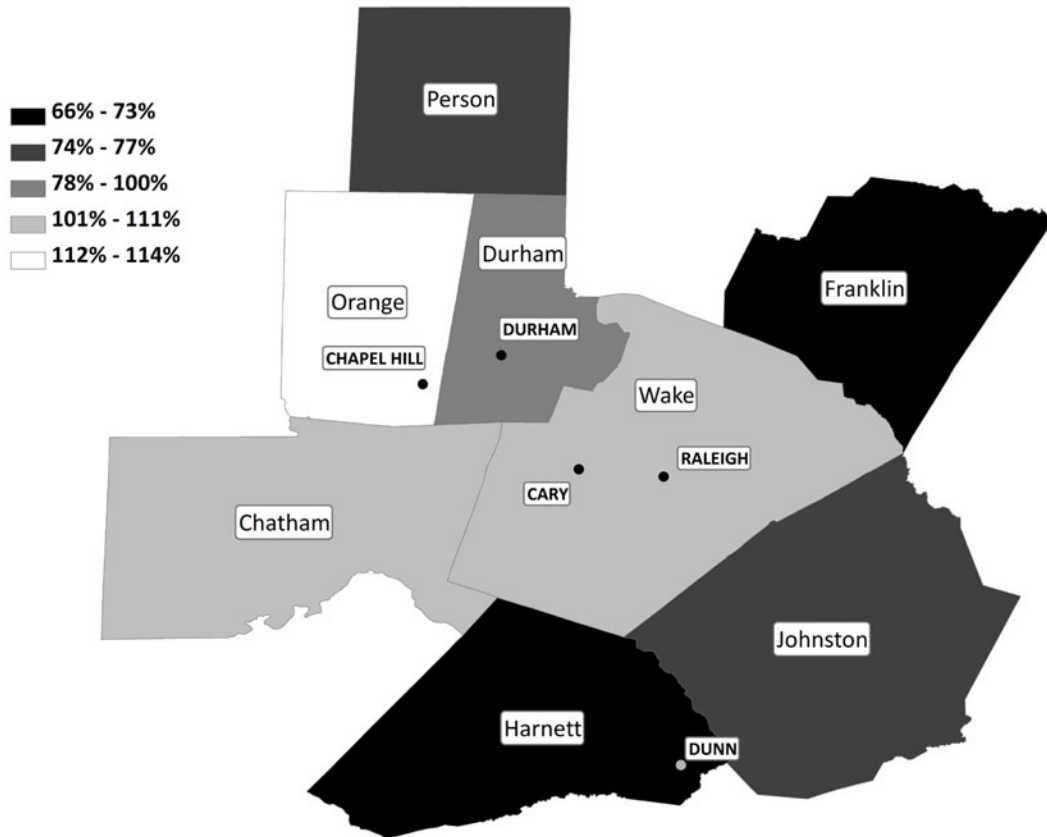
Before describing each perspective, it is important to acknowledge that each one is more complex than its description implies. An exhaustive account is beyond this book’s scope, and the intention here is to provide a basic orientation to common ways of understanding regions. In practice, most regional studies blend the functional and administrative perspectives for reasons of feasibility and because civic leaders tend to think in terms of administrative structures. The exact mix of perspectives, however, hinges on the particular research questions and the availability of pertinent data.

TERRITORIAL PERSPECTIVE

The *territorial perspective* envisions a region as a “historically evolved, contiguous society that possesses a physical environment, a socioeconomic, political, and cultural milieu, and a spatial structure distinct from the other major territorial units, city, and nation.”⁶ The strength of this view is its recognition of the interplay between the physical environment and social dynamics. Regions are not simply discrete physical spaces, but rather the intricate products of economic and social interactions. Economic factors are particularly important in differentiating regions, as evidenced in the journalist Tom Wolfe’s observation about how when traveling by road in the United States “the only way you could tell you were leaving one community and entering another was when the franchises started repeating, and you spotted another 7-Eleven, another Wendy’s, another Costco, another Home Depot.”⁷

More seriously, besides separating regions from one another, economic factors structure social relationships among different segments of the population. Look at how

Map 1.2 Average Per Capita Income by County as a Share of Average per Capita Income in the Raleigh-Durham-Cary, NC Combined Statistical Area, 2006–2010



Source: Author's analysis of U.S. Census Bureau, American Community Survey, Five-Year Estimates, 2006–2010; and U.S. Office of Management and Budget, “Update of Statistical Area Definitions and Guidance on Their Uses (OMB Bulletin No. 10-02),” December 1, 2009, <http://www.whitehouse.gov/sites/default/files/omb/assets/bulletins/b10-02.pdf>. Map prepared by William High.

the dominance of the automotive industry in Detroit long shaped not just the region's economic activities, but also its local labor practices and social norms about what constituted—and who was entitled to—a middle-class lifestyle. The auto industry's dominance further influenced other aspects of regional life, such as local politics, due to trade union activism, and the cultural scene, thanks to corporate and personal philanthropy.⁸ A similar dynamic has occurred in the Research Triangle region over the past half century in response to the growth, evolution, and decline of the technology and life science firms operating in the Research Triangle Park, a centrally located research campus.⁹

When viewing a region in terms of territory, it is important to remember three things. First, a territorial region may or may not possess a distinct political identity. The Research Triangle region, for example, has neither an independent political existence nor any binding form of regional government. Second, territorial regions are dynamic in nature and change over time in response to economic and social forces. Finally, despite being located in the same general physical area, places within a region are not homogenous in character: intraregional differences exist because economic and social forces seldom exert uniform influences across an entire territory. During the period spanning 2006 to 2010, for instance, average per capita income in Wake County (Raleigh) was 11.5 percent higher than the level posted in the entire Research Triangle, but average per capita income in neighboring Franklin County (Louisburg) was 27 percent lower than the regional figure (see Map 1.2).¹⁰

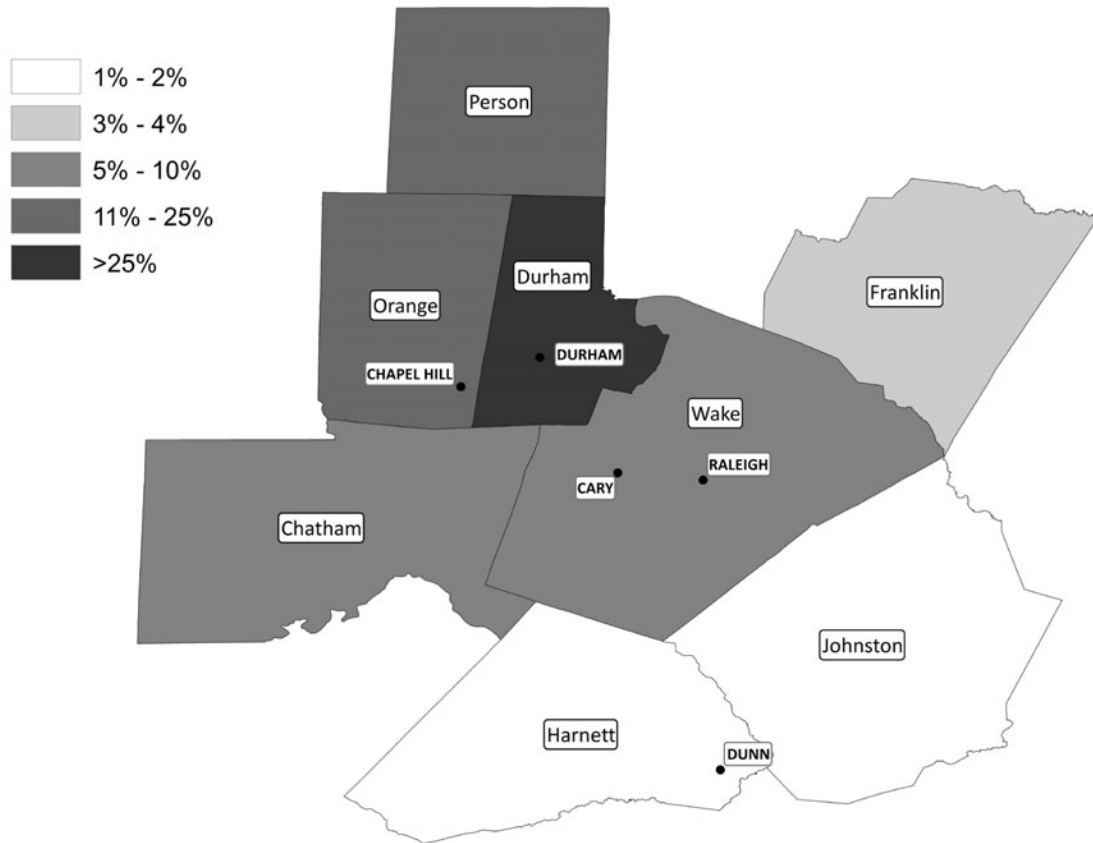
FUNCTIONAL PERSPECTIVE

A second way of viewing a region is from a *functional perspective*. Central to this view is the notion that regions contain certain dominant cities or places (sometimes called *nodes*) that are tied to other, less dominant places within the area. A region therefore is a discrete spatial area containing interconnected places of differing sizes and types (e.g., town and country, farms and cities, central business districts and suburbs, residential communities and office parks). While the parts of a region may differ in terms of characteristics and functions, they share links that “can be identified through observation of flows of people, factors, goods, and communication.”¹¹

Commuting patterns are one manifestation of the functional relationships that exist within a region. Compare the typical commuting patterns of the residents of two counties in the Research Triangle—Orange (Chapel Hill) and Wake (Raleigh)—between 2006 and 2008 (see Map 1.3). During that period, Orange County was home to an average of 62,405 working residents, of whom 58.7 percent commuted to worksites within the county and the remaining 41.3 percent to jobs in other counties. The most common destination was neighboring Durham County (Durham), to which 59.9 percent of all commuters traveled, followed by Wake County, which was where 15.4 percent of commuters headed. During the same three-year period, Wake County was home to an average of 427,259 working residents, of whom 81.6 percent worked within the county. Of the 18.4 percent of county residents who worked elsewhere, 59.3 percent journeyed to Durham County while 7.4 percent commuted to Orange County. In both communities, the overwhelming majority of commuters traveled alone in private automobiles.¹²

These commuting patterns reveal some of the functional relationships that exist among places within the Research Triangle. While Orange and Wake counties share commuting ties, those links are not as strong as those that exist between each county and Durham County, which clearly is a regional employment center. Similarly, given that Interstate 40 is a major thoroughfare connecting Durham, Wake, and Orange counties, it is unsurprising that multiple retail centers have emerged along a corridor that carries sizable numbers of people to and from work.

Map 1.3 Share of Working-Age Residents Commuting for Work to Durham County, NC, Counties in the Raleigh-Durham-Cary, NC Combined Statistical Area, 2006–2008



Source: Author's analysis of U.S. Census Bureau, American Community Survey, Three-Year Estimates, 2006–2008; and U.S. Office of Management and Budget, “Update of Statistical Area Definitions and Guidance on Their Uses (OMB Bulletin No. 10-02),” December 1, 2009, <http://www.whitehouse.gov/sites/default/files/omb/assets/bulletins/b10-02.pdf>. Map prepared by William High.

Despite its emphasis on the actual relationships among different parts of a region, the functional perspective suffers from weaknesses. Because regional boundaries frequently are blurry, it can be difficult to determine which peripheral areas belong to a region and which ones fall outside of it; this choice may prove especially vexing when regional functions spill across administrative and political borders. Another difficulty occurs when dealing with an area with multiple large population or economic centers, as it can be difficult to determine when one region has evolved into two or more regions. Lastly, because regions are dynamic in nature, intraregional functional relationships may change over time.

ADMINISTRATIVE PERSPECTIVE

An *administrative perspective* understands a region in relation to the organizational and political structures used to deliver public services, such as counties, cities, planning boards, and transportation districts. These entities are spatial areas “over which economic decisions and policy instruments apply.”¹³ As bureaucratic structures, administrative agencies tend to collect extensive information about their activities, and these records are robust sources of regional data.

Like most states, North Carolina has created counties to deliver certain governmental services in specific areas. Each Research Triangle county, for instance, must administer “state and federal-state social service programs for the benefit of county residents.”¹⁴ Because county agencies oversee the programs, they tend to collect data only for the county for which they are responsible. That explains why studies of social services in North Carolina typically center on counties. Research into workforce training, in contrast, regularly employs data compiled by the local workforce boards legally responsible for coordinating training within discrete, often multicounty areas (see Map 1.4).

Look beyond its apparent simplicity, and the administrative perspective suffers from practical problems such as inconsistent and incomparable data collection. More important, social and economic phenomena seldom follow administrative lines due to the mobility of individuals and the fact that the drawing of administrative lines often occurred years earlier for reasons unrelated to contemporary conditions. North Carolina established most of its counties in the nineteenth century in response to jockeying between the eastern and western parts of the state for control of the statehouse; when a new county was formed in the west, legislators would split an eastern county into two in an effort to offset the new western one.¹⁵ That solution may have fit the times, but it has no relationship to the realities facing today’s Research Triangle—a region that effectively did not exist until decades after the creation of North Carolina’s most recently formed county.

CENSUS GEOGRAPHY: A POWERFUL BUT CONFUSING FRAMEWORK

The U.S. Census Bureau doubtlessly is the nation’s best-known public statistical agency thanks to its responsibility for conducting the Decennial Census of Population and Housing, an enumeration of the population that is constitutionally required to occur every 10 years for the purposes of allocating congressional seats and electoral votes among the states.¹⁶ The census started as a loosely organized affair that grew in size and scope along with the country, and in 1902, the complexity of the task led the U.S. Congress to establish a permanent Census Bureau, which today is an agency within the U.S. Department of Commerce.¹⁷

The mission of the Census Bureau is to be “the leading source of quality data about the nation’s people and economy.”¹⁸ A challenge associated with that task is how best to organize the vast amounts of information that the agency collects, and to that end the Census Bureau has developed a geographical framework that enables the tabulation of data from the level of individual housing units to the entire nation.¹⁹ The system is

Map 1.4 Workforce Development Boards in the Raleigh-Durham-Cary, NC Combined Statistical Area, 2009 Delineation

Source: North Carolina Department of Commerce. Map prepared by William High.

a practical way of organizing regional data, but the structure and terminology appear, at first glance, to be rather complicated.²⁰

In essence, the Census Bureau's geographic framework is a hierarchical structure "derived from the legal, administrative, or areal relationships" that exist among governmental and statistical units.²¹ Governmental units such as cities, counties, and states are familiar to most people, but statistical units such as census tracts and metropolitan statistical areas are less well understood. Statistical units often strike people as unreal because they "are created by the Census Bureau and do not exist as independent governmental units."²² In reality, even governmental units are artificial constructs: counties and cities, after all, are "created by the state and derive their authority and power solely from the state."²³ Nevertheless, people perceive governmental units as being more tangible, perhaps because it is easy to conflate them with communities.